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ABSTRACT

The goal of this comparative essay on higher education in Mexico and the United States is to provide a description of the common issues within the different contexts of each country to facilitate discussions of new binational programs. Government and business sectors of both countries have acknowledged the need to reform their education, scientific, and technological systems as well as workforce training capabilities. Factors contributing to the need for reform include: a perceived decline in educational quality; increasing enrollment demands; increasing social, economic, and skill diversity within the workforce; rapid advances in technology; and global economic competition. Both countries are seeking a balance in several areas including responding to individual needs versus societal needs, maintaining institutional autonomy while increasing accountability, improving program quality while opening access, addressing global concerns while maintaining national identity, balancing conflicting economic needs, reinventing the university, and developing innovative ways to collaborate between institutions and countries in a global context. (Contains 62 references.) (JLS)

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ED 410 830

Understanding the Differences

A Working Paper Series on Higher Education in the U.S. and Mexico

Comparative Report

An Essay on Higher Education in Mexico and the United States

by
Judith I. Gill
and
Lilian Alvarez de Testa

IAE 030 402

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Comparative Report

Understanding the Differences: An Essay on Higher Education in Mexico and the United States

by Judith I. Gill and Lilian Alvarez de Testa

"Understanding the Differences"
A Working Paper Series on Higher Education in the U.S. and Mexico

Western Interstate Commission for Higher Education
P.O. Box 9752
Boulder, Colorado 80301-9752 U.S.A.

Western Interstate Commission for Higher Education

The Western Interstate Commission for Higher Education (WICHE) is a public, interstate agency established to promote and to facilitate resource sharing, collaboration, and cooperative planning among the western states and their colleges and universities. Member and affiliate states include Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming.

WICHE's broad objectives are to:

- Strengthen educational opportunities for students through expanded access to programs,
- Assist policymakers in dealing with higher education and human resource issues through research and analysis,
- Foster cooperative planning, especially that which targets the sharing of resources.

In 1993, WICHE, working in partnership with the Mexican Association for International Education (AMPEI), developed the U.S.-Mexico Educational Interchange Project to facilitate educational interchange and the sharing of resources across the western region of the U.S. and with Mexico. In 1995, the project began a trinational focus which includes Canada, with the goal of fostering educational collaboration across North America. This series, "Understanding the Differences," was developed as a resource for the project and was created under the direction of WICHE's Constituent Relations and Communications and Information and Policy Units.

Funding for the working paper series was provided by The Ford Foundation. Publications in the series include:

- Working Paper #1: *Policy Approaches to Evaluation and Incentive Funding in U.S. and Mexican Higher Education* (Publication Number 2A261)
- Working Paper #2: *Higher Education Faculty in Mexico and the United States: Characteristics and Policy Issues* (Publication Number 2A262)
- Working Paper #3: *The Educational Systems of Mexico and the United States: Prospects for Reform and Collaboration* (Publication Number 2A263)
- Working Paper #4: *Higher Education's Responsiveness in Mexico and the United States to a New Economy and the Impacts of NAFTA* (Publication Number 2A264)
- Cuaderno de Trabajo #4: *Respuesta de la Educación Superior de México y los Estados Unidos a la Nueva Economía y a los Impactos del Tratado Trilateral de Libre Comercio* (Publication Number 2A276)
- Working Paper #5: *The Role of Technology in Higher Education in North America: Policy Implications* (Publication Number 2A291)
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Preface

A major obstacle to binational educational interchange across the U.S.-Mexican border is that educational policymakers and practitioners lack familiarity with the structures and issues of each other's educational systems. There are often assumptions on both sides that the two systems function similarly. To date, only limited information exists on educational policy issues affecting the United States and Mexico, particularly in a comparative context.

In an effort to fill that void, and with the encouragement of The Ford Foundation's Latin America Representative Norman Collins, and the The Ford Foundation Director for Education and Culture, Alison Bernstein, WICHE has developed a series of reports, entitled *Understanding the Differences*. The series analyzes the major policy issues and differences in each country, so that meaningful discussions among higher education leaders and policymakers may occur toward the goal of developing new binational initiatives.

The initial draft of this comparative essay, which serves as an umbrella piece to the series, was first prepared for use by participants at the WICHE-AMPEI Educational Leadership Seminar, held on May 15-17, 1994 in Ensenada, Baja California. The insightful discussions generated by seminar participants and panelists heavily influenced the current version of this report.

Although acknowledging the significant differences, the essay portrays neither system as a model or quality standard for the other. In both countries, new challenges are presented because of the need to deal simultaneously with access, quality, autonomy, and accountability; freedom of research and social relevance; scientific advancement and workforce training; and local, state, national, and global issues.

This essay considers the structure of the education system since the 1960s, when there was world-wide expansion and diversification of higher education. It draws upon the work of many scholars who have analyzed higher education in each country, and will attempt to present the richness of their analyses.

Throughout the essay, generalized statements are made. The authors recognize that no statement is always applicable to a higher education institution or system; nation, state, or region. This essay is not meant to provide exact descriptions; it is meant to serve as a basic guide to better understanding the differences and similarities.

While fully acknowledging the distinct contexts particular to each country, the report analyzes shared factors which contribute to the need for reform and change, including a perceived decline in educational quality; increasing enrollment demands; increased social, economic and cultural diversity within the workforce; rapid advances in technology; and increased and global economic competition.

The efforts of many have contributed to the creation of this final report. We are indebted to Judith I. Gill, former Program Director of WICHE's Research and Policy Analysis Unit, now serving as Associate Vice Chancellor for the Massachusetts Higher Education Coordinating Council and Lilian Alvarez de Testa, Researcher at the Instituto de Investigaciones Filológicas of the Universidad Nacional Autónoma de México who worked as co-authors on the draft report in the spring of 1994. Alvarez de Testa's report "Higher Education in Mexico: A Basis for a Mexico-U.S. Comparative Approach" (October, 1994) contributed significantly to the report as it now stands, revised by Judith Gill.

Material on Mexican higher education draws heavily from the work of two important groups: the 2nd National Educational Research Congress and ANUIES, the National Association of Higher Education Institutions. More than ten years of educational research and the work of many prominent scholars was incorporated in the "Synthesis and Perspectives" report that was used by the 2nd Congress. We wish to thank Eduardo Wiess of CINVESTAV, for providing access to these materials. We also would like to thank Javier Mendoza and Dolores Sánchez Soler who provided ready access to the many educational reports produced by ANUIES.

Most of the material on issues affecting higher education in the United States and in particular, higher education in the western states, comes from recent reports and studies produced by the Office of Research and Policy Analysis at the Western Interstate Commission for Higher Education (WICHE), especially reports from the study on higher education and the economy in the West.

Information obtained through research on the working papers of the *Understanding the Differences* series significantly enriched the final version of the main comparative report. WICHE acknowledges the binational teams of the working paper authors for their cooperative efforts: Peter Ewell and Rollin Kent; Cheryl Lovell and Dolores Sánchez Soler; JoAnn Canales, Leticia Calzada Gómez and Néllyda Villanueva; and, Elizabeth Santillanez and her advisor, Paul Ganster.

There are many individuals whose insights have enriched this ambitious essay. We would like to thank Antonio Rivera Flores, Carlos Ornelas, Jim Wilkie, Alan Adelman, Arturo Ranfla, and Daniel Levy. We would also like to express our appreciation to David Lorey, Rollin Kent, Jesús Galaz Fontes, and Sylvia Ortega Salazar for their assistance and important insights in the review of the final draft.

Jackie Spears provided valuable editorial assistance in the revision of the final report. Thanks also to WICHE staff members Cheryl Blanco and Robin Etter Zúñiga (review of statistics and final manuscript); Debby Jang and Cherie Pederson (graphics support); Kelly Zweifel (library research); and Mary Ellen Keller (production). And finally, WICHE acknowledges Jere Mock for managing the project and her assistance in editing the series; Francisco Marmolejo for his support in the translation of the main report and the working papers in the series; and, Margo Schultz for her many contributions including coordinating the communications with the authors and reviewers, and layout of the final manuscript.

For a more detailed perspective on comparative education in Mexico and the United States, we recommend you consult the four working papers which make up WICHE's *Understanding the Differences* series:

- Working Paper #1: *Policy Approaches to Evaluation and Incentive Funding in U.S. and Mexican Higher Education,* by Peter Ewell and Rollin Kent. This paper explores the growing desire shared by the two nations to obtain a significant "return on investment" in postsecondary education. The authors establish a context for comparison within Mexico and the United States and discuss the challenges and central policy dilemmas that each country faces as it attempts to implement the policy tools of evaluation and incentive funding. Past experiences and future directions for accountability and categorical funding mechanisms are explored.
- Working Paper #2: *Higher Education Faculty in Mexico and the United States: Characteristics and Policy Issues*, by Cheryl Lovell and Dolores Sánchez Soler. This paper describes and compares Mexican and U.S. faculty characteristics and conditions, including total number of faculty, student-teacher ratios, full- versus part-time status, rank, tenure, average salaries, gender and ethnicity, and union membership. Several contemporary policy issues are explored including faculty evaluation, workload and productivity, curriculum reform, faculty involvement with the business community, faculty development, and implications that NAFTA will have for

faculty on both sides of the border. The paper concludes with some suggested areas for collaborative efforts of faculty in the two countries.

- Working Paper #3: *The Educational Systems of Mexico and the United States: Prospects for Reform and Collaboration,* by JoAnn Canales, Leticia Calzada Gómez and Néllyda Villanueva. This paper describes the sequential processes of education (from basic to higher education) in Mexico and the U.S. as a basis for understanding the relationships between the various levels of education. It analyzes the fragmented nature of the educational systems common to both countries and outlines possible solutions for integrating the different systems. Also included are brief overviews and examples of national, state and local collaborative relationships. The paper concludes with a discussion of ways to nurture and enhance binational collaborative relationships.
- Working Paper #4: *Higher Education's Responsiveness in Mexico and the United States to a New Economy and the Impacts of NAFTA,* by Elizabeth Santillanez. This paper discusses the critical role that higher education must play as the U.S., Mexican and Canadian markets become more integrated since the implementation of NAFTA. The paper gives an overview of recent transformation of economic developments and business needs which require that higher education better prepare students to compete in the global workforce. It describes initiatives currently underway and gives recommendations for higher education policymakers to consider as they develop a workforce which is competitive and culturally-aware. *(Spanish version available.)*

WICHE hopes that this series will foster improved understanding of significant higher education issues in both countries and, over time, lead to new cooperative efforts to increase education opportunities in both nations.

Richard W. Jonsen
Executive Director

Western Interstate Commission for Higher Education
Boulder, Colorado
October 1995

List of Abbreviations

ABS	Association of Borderland Scholars	Asociación de Investigadores sobre las Fronteras
ACE	American Council on Education	Consejo Estadounidense para la Educación Superior
AFT	American Federation of Teachers	Federación Estadounidense de Profesores
ANUIES	National Association of Universities and Institutions of Higher Education	Asociación Nacional de Universidades e Instituciones de Educación Superior
AMPEI	Mexican Association for International Education	Asociación Mexicana para la Educación Internacional
CQAIE	Center for Quality Assurance in International Education	Centro para la Evaluación de la Calidad de la Educación Internacional
APEC	Asia Pacific Economic Cooperation	Organización para la Cooperación Económica del Asia-Pacífico
AAUP	American Association of University Professors	Asociación Estadounidense de Profesores Universitarios
CAPFCE	Federal Administrative Committee for the Construction of Schools	Comité Administrativo Federal para la Construcción de Escuelas
CETE	Educational Television Training Center	Centro de Entrenamiento en el uso de la Televisión Educativa
CIIES	Interinstitutional Committees for the Evaluation of Higher Education	Comites Interinstitucionales para la Evaluación de la Educación Superior
CINVESTAV	Center for Research and Advanced Studies	Centro de Investigación y Estudios Avanzados
COEPES	State Coordinating Committee for Higher Education Planning	Coordinación Estatal para la Planeación de la Educación Superior
CONACYT	National Council for Science and Technology	Consejo Nacional de Ciencia y Tecnología
CONALEP	National College of Professional Technical Education	Colegio Nacional de Educación Profesional Técnica
CONAEVA	National Commission for the Evaluation of Higher Education	Comisión Nacional para la Evaluación de la Educación Superior

CONPES	Mexican National Coordinating Board for Higher Education Planning	Coordinación Nacional para la Planeación de la Educación Superior
CORPES	Regional Coordinating Council for Higher Education Planning	Coordinación Regional para la Planeación de la Educación Superior
COSNET	Council for the National Sytem of Education Technology	Consejo del Sistema Nacional de Educación Tecnológica
CUPIA	Council of Public Universities and Similar Institutions	Consejo de Universidades Públicas e Instituciones Afines
ECS	Education Commission of the States	Comisión Educativa de los Estados
FIPSE	Funds for the Improvement of Postsecondary Education—U.S. Department of Education	Fondo para el Mejoramiento de la Educación Media Superior y Superior — Departamento de Educación de los Estados Unidos
FLACSO	Latin American School of Social Sciences	Facultad Latinoamericana de Ciencias Sociales
FOMES	Fund for Higher Education Modernization	Fondo para la Modernización de la Educación Superior
GATT	General Agreement on Tariffs and Trade	Acuerdo General de Aranceles y Comercio
ICED	International Council for Educational Development	Consejo Internacional para el Desarrollo Educativo
IIE	Institute of International Education	Instituto para la Educación Internacional
IRSC	Institute for Regional Studies of the Californias	Instituto de Estudios Regionales de las Californias
ITESM	Monterrey Institute of Technology	Instituto Tecnológico y de Estudios Superiores de Monterrey
NAFSA	Association of International Educators	Asociación de Educadores Internacionales
NAFTA	North American Free Trade Agreement	Tratado Trilateral de Libre Comercio de América del Norte (TLC)
NCHEMS	National Center for Higher Education Management Systems	Centro Nacional de Sistemas Administrativos para la Educación Superior
NEA	National Education Association	Asociación Nacional de Educación
NSF	National Science Foundation	Fundación Nacional para la Ciencia

OECD	Organization for Economic Cooperation and Development	Organización para la Cooperación Económica y el Desarrollo
PROFMEX	Consortium for Research on Mexico	Consorcio para Investigación sobre México
PROIDES	Integral Program for the Development of Higher Education	Programa Integral para el Desarrollo de la Educación Superior
SEIS-ITESM	Satellite Interactive Education System-ITESM	Sistema Satelital de Educación Interactiva del ITESM
SEP	Mexican Ministry of Education	Secretaría de Educación Pública
SESIC	Undersecretaryship of Higher Education and Scientific Research	Subsecretaría de Educación Superior e Investigación Científica
SHEEO	State Higher Education Executive Officers	Ejecutivos Estatales de Educación Superior
SINAPPES	National System for Long-term Planning in Higher Education	Sistema Nacional para la Planeación Permanente de la Educación Superior
SNI	National System of Researchers	Sistema Nacional de Investigadores
SNTE	Mexican National Teachers' Union	Sindicato Nacional de Trabajadores de la Educación
SPRE	State Postsecondary Review Entities	Comisiones Estatales de Evaluación de Instituciones de Educación Media Superior y Superior
SUPERA	National Program for the Advancement of Academic Personnel	Programa Nacional de Superación del Personal Académico
UABC	Autonomous University of Baja California	Universidad Autónoma de Baja California
UAM	Autonomous Metropolitan University	Universidad Autónoma Metropolitana
UANL	Autonomous University of Nuevo Leon	Universidad Autónoma de Nuevo León
UNAM	National Autonomous University of Mexico	Universidad Nacional Autónoma de México
USDE (DOE)	United States Department of Education	Departamento de Educación de los Estados Unidos
USIA	United States Information Agency	Agencia de Información de los Estados Unidos

WCET	Western Cooperative for Educational Telecommunications (at WICHE)	Cooperativa Occidental para la Telecomunicación Educativa
WICHE	Western Interstate Commission for Higher Education	Comisión Interestatal para la Educación Superior del Occidente de los Estados Unidos

Introduction

This is a comparative essay on higher education in Mexico and the United States. Its goal is to provide a description of the common issues yet different contexts in each country in order to facilitate meaningful discussions of new binational programs. The essay focuses on the differences between the two systems. It portrays neither system as ideal, but tries to identify areas where the experience of one country can be relevant to the other.

Comparisons between the systems of higher education in Mexico and the United States reveal similar problems defined by markedly different cultures and histories. The governments and business sectors of both countries have acknowledged the need to reform their education, scientific and technological systems as well as their workforce training capabilities (Rivera Flores, 1992). Factors contributing to the need for reform and change include: a perceived decline in educational quality; increasing enrollment demands; increasing social, economic, and skill diversity within the workforce; rapid advances in technology; and global economic competition. What differs, however, is the social and economic history influencing the development of each country's system of higher education.

Efforts to contrast systems of higher education are inherently difficult, given that significant differences exist within any one system. The higher education systems in both Mexico and the United States are large and complex. Comparisons, even though they may oversimplify the complexity of the system, are still helpful in working towards the development of collaborative programs.

Significant Differences[1]

Different Philosophies on Higher Education's Mission

Societal versus individual goals. A significant difference between the two countries is found in the philosophies that guide their curriculum. Although both countries recognize the value of higher education to the individual and to society, the curriculum in Mexico is more directly linked to societal goals; in the United States it is associated more closely to individual goals.

In Mexico, upon completion of coursework and other academic requirements, the federal government grants to the graduate a license to practice his or her profession. In theory, the course of study (*carrera*) has been shaped by consideration of social problems, and the new graduate will be aware of social needs and responsibilities. Thus, his or her education will benefit society as a whole. Some people question, however, whether or not this is really achieved.

Despite this emphasis on society's needs, the individual's goals and interests are taken into account. One purpose of education, according to the Mexican Constitution, is to further the harmonic development of the individual's potential. This said, it also must be noted that there are few services that help students make an informed choice regarding the institution and career path they will enter. There is little or no comparative information available on costs, facilities, faculties, course offerings, financial aid, and housing. In Mexico students are not considered consumers, but societal members whose potential to contribute to society must be developed within well-defined professional programs.

Higher education in the United States follows more closely a social philosophy that places emphasis on individually defined goals or objectives. The assumption is that economic opportunities and social goals will be realized as individuals are allowed to develop in their own ways. In the United States the student is frequently referred to as a higher education consumer or client. Students have significant flexibility in their choice of courses; they are not required to declare a major (or course of study) at the beginning of their college career; and many student support services are available on campus. Curricular programs reflect student as well as faculty perceptions of important skills and topics.

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[1] The data used in this essay for Mexico and the United States are provided to assist the reader in understanding relevant characteristics, but are not necessarily comparable.

In Mexico, higher education's mission is to prepare professionals, university professors, technicians, and researchers who are useful to the country, who produce knowledge, and who extend the benefits of culture to society as a whole. "Usefulness" is integrated into the educational program through a course of study that has been designed with social problems in mind and through the "social service" (*servicio social*) which students are required to participate in upon completion of coursework. "Social service" corresponds to what might be typically called "community service" in the United States. Supervised by the federal government, the *servicio social* program requires students to work a certain number of hours in a project related to their profession, at little or no pay. The intention of the program is to generate "social awareness" in the students, and to involve them in a socially relevant project. This program is most effective with students in the health fields, but has its limitations when applied to other disciplines.

Clark Kerr, President Emeritus of the University of California system, argues that the primary goals of higher education in the United States are to provide opportunities for the individual's intellectual, aesthetic, and ethical development; to transmit and advance learning and knowledge; and to critically evaluate society for its own renewal (Kerr, *et.al.*, 1992). American higher education's mission is frequently described as—teaching (knowledge transfer), research (knowledge discovery), and public service (knowledge application).

Professional education versus general education. The professional and public orientation of higher education in Mexico has been one of its principal characteristics since the 16th century (Levy, 1986). Designed to lead to certification in a profession, higher education curricula are more professionally oriented in Mexico than in the United States. Students complete a standardized course of study with some flexibility for the individual's preferences, but yet keeping within the professional field. General education is mainly offered in *preparatorias* (similar to U.S. high schools). In the United States, as in Mexico, general education is a focus of the high school curriculum, but also provides a common foundation for undergraduate studies at many colleges and universities. Professional education is then offered in master's degree and professional programs at universities as well as through technical education programs at two-year community colleges. A brief look at secondary and postsecondary education in the two countries and the problems each face help illustrate the impact this philosophical difference can have.

Secondary Education. The grades and ages of students in junior high school (or middle school) and high school in the United States are equivalent to the *secundaria* or *educación media básica* and *bachillerato* or *educación media superior*

(also called *preparatoria*) levels of education in Mexico (Canales, *et al.*, 1995). The *secundaria* has two educational tracks; general and technical (vocational). Both are offered in traditional school settings, via telecommunications (*telescundaria*), and in open programs for the non-traditional student population. The general program is discipline-focused and coursework is not articulated with prior or subsequent levels of schooling. The *bachillerato* degree is awarded for completion of *preparatoria* coursework; it can be a terminal degree (general or vocational education) or it can serve as a prerequisite for higher education (general education). Approximately 76 percent of the elementary school student population continues on to this level of education and approximately 57 percent complete *bachillerato* degrees.

In the United States, school attendance is typically mandatory through age 14.[2] Education at the junior high (or middle school) level focuses on the transition from elementary school to high school, enabling students to strengthen basic skills and explore career interests. The high school curriculum typically emphasizes general education and is organized around subject matter courses, e.g., mathematics, science and English. Students completing a certain number of courses are awarded a high school diploma. Students who do not complete high school[3] and are 16 years of age or older may take a high school equivalency examination, the GED (General Equivalency Degree), which is accepted by most employers and universities.

Higher Education. By supplying able professionals, most universities in Mexico have been willing instruments of economic development since 1929 (Lorey, 1993; Sarukhan, 1994). However, higher education in Mexico faces several challenges. Characteristically rigid curricula offer little room for adaptability in a world where everything, including professional standards and practices, changes rapidly. The emphasis on professional education creates a tension between recruiting able and reputable professionals compared to faculty who have completed graduate degrees. The lack of active and official involvement of collegiate professional bodies in certification or accreditation leaves the federal government solely responsible for the evaluation of higher education. These problems must be dealt with in order to pave the way for the common job market NAFTA proposes.

In contrast to the professional orientation of higher education in Mexico, general education provides the foundation for undergraduate education in the

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[2] School attendance is mandatory in both countries at the elementary level. Recent constitutional changes in Mexico made attendance at the secondary level mandatory as well.

[3] The dropout rate in the United States ranges from 10 to 43 percent depending on a variety of factors which include the number of grades repeated and the highest grade repeated.

United States. It is a widely held belief that a gene... individuals develop strong conceptual skills, creati... needed to function effectively in a democratic socie... students develop a stronger sense of self, are more ... relation to others; and are more capable of working ... (Brandt, 1989; Gardner, 1984; Boyer, 1987).

In response to concerns about university gra... knowledge about the "real world" once they enter th... emphasis in the United States is being put on profes... In 1970 the majority of students chose majors in th... 1985 the percentage choosing these fields had declin... percent choosing business as a major increased from ... single most popular major (WICHE, 1992). Moreove... credentials have encouraged many liberal arts colle... original missions and become small professional coll... 1990). Market trends have been highly influential i... curricula from a heavy emphasis on general educatio... which combines general education with professional ...

Thus, it is interesting to note that while in M... undergraduate education studies has been towards ... specialized studies, the emphasis in the United Stat... (Fuentes, 1991). But both countries are now seekin... between specialization and general studies. Also no... between the concepts of *servicio social* (social service) ... the value of social service is not directly linked to job ... perceived as an exercise in social awareness (at least ... Although the Clinton administration has initiated an ... Corps" program, which ties more directly to the Mexi... student internship is the more common experience in ... internship is a curricular experience valuable for its ... student's chosen field or beneficial for the opportunity ... the job market.

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The Linkage Between Higher Education and Government

Legal basis. The relationship between higher education and government depends, in part, on the legal basis established by each nation's constitution.

Education is a state responsibility in the United States. Historians frequently note that education was not even mentioned in the United States Constitution because its framers intended education to be a state responsibility (Fuller and Pearson, 1969). Although the federal government plays a role in higher education, the principle of states' rights (granted through the Tenth Amendment) prevails with respect to control of education (Blocker, *et al.*, 1975). Historically, the federal government's involvement has been limited to providing funding for research and student financial aid.[4]

In contrast, the Mexican Constitution (Article III, 1993) assigns primary responsibility for education to the Federal Government:

"...(VI) the Federal Government is to promote and attend to all types and levels of education, including higher education, technological and scientific research, and must promote the strengthening and promotion of culture...

(VII) the Private Sector (*particulares*) is authorized to impart all levels and types of education, but the Federal Government will grant or withdraw accreditation (*reconocimiento oficial*) to studies carried out in private institutions...

Universities and other higher education institutions which are granted autonomy have the right and responsibility of governing themselves; they will carry out their ends of teaching, researching and fostering culture according to the principles of this article, observing academic freedom; they will define their plans and programs; fix the terms of recruitment, hiring, promotion and tenure of their faculty; and will manage their assets. The labor relations of academic and administrative employees are regulated by section A of Article 123 of the Constitution ... according to the characteristics of this special kind of work, as long as they are compatible with autonomy, academic freedom and research, and the ends of this type of institution.

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[4] Increasingly the United States Office of Education, under pressure from Congress, is regulating standards and practices for institutions that accept federal student financial aid funds. This departure from tradition has been prompted by concern over high student default rates on student loans and a growing frustration with higher education costs.

(VIII) The Congress of the Union, with the objectives of unifying and coordinating education in the Republic, will issue the necessary laws, destined to distribute the social function among the Federation, the States and the *Municipios* (counties), will set the economic contributions of each, and will define the sanctions applicable to state and federal workers who do not observe or do not enforce these dispositions, as well as the sanctions for those who infringe upon them."

In most countries, the history of economic and social development is mirrored in their systems of higher education and Mexico and the United States are no exception. Higher education in Mexico reflects the tensions that exist in a federal republic with a highly centralized administration, where the federal government is the chief architect of policy. The 1992 decentralization process for elementary and secondary education and teacher education undertaken by the federal government as "administrative deconcentration," therefore, is a reflection of that tension. The 1992 *Acuerdo para la descentralización de la Educación Básica y Normal* (Agreement for the Decentralization of Basic Education and Teacher Training) transferred administrative functions, authority, assets, financial resources and labor relations to the states. The federal government maintains control over tax collection and allocation of funding for education.

More recently, during his annual state of the union address in September 1995, President Ernesto Zedillo announced the decentralization of the higher education budget from the federal government to the state government. This change will inevitably redefine the relationship between the universities and federal government, and between the states and the federal government.

Autonomy. The role of the federal government in Mexican higher education remains significant.[5] The Secretaría de Educación Pública (SEP) has jurisdiction over all levels of education and appropriates funding. The Undersecretary for Higher Education and Scientific Research and the Director General for Higher Education manage relations with the universities. The Undersecretary for Technological Research and Education and the Director General for Technological Institutes control the public technological system.

Public universities can be state controlled or autonomous. Thus, the structure, organization, teaching methods, plans and admissions procedures vary enormously. Autonomy, by definition, means freedom of governance, but generally implies some form of collegial decision making. Some private institutions have

[5] The relationship among the federal and state governments and higher education institutions in Mexico can be understood quantitatively by the relative weight each carries in the financing of higher education. Qualitatively, several historical accounts such as Lorey (1993) or political analyses, like Porter (1988) are available.

been granted autonomy by the federal government (Universidad Iberoamericana; Instituto Tecnológico Autónomo de México), but the remainder must submit plans to SEP for accreditation (*incorporación*). These comments notwithstanding, it is the State, through the Dirección General de Profesiones, which renders degrees valid. Public technological institutions are under tighter and direct control of SEP.

Higher education is highly dependent on funding from the federal and state governments, and funding support influences higher education policy development and the level of faculty salaries. Formal university autonomy, therefore, is limited by the need for government funding.

In the United States there is wide support for the position that institutional quality is strongly correlated with institutional autonomy. However, for the past two decades there has been a continually increasing belief that higher education must be held more accountable, not just to its internal constituents, but to the general public as well. In 1977, the Sloan Commission on the Regulation of Higher Education stated that while strongly supporting the "doctrine" that the social and economic benefits of higher education require broad institutional autonomy, it is unreasonable and unfair for higher education to expect that it should not be held accountable for the expenditure of billions of state and federal tax dollars (Sloan Commission, 1980).

Funding. The relationship between the university and federal and state governments is strongly influenced by the degree of funding each provides. In 1994, SEP reported that federal funds in Mexico equaled 67 percent of revenues in public universities, and that states provided the remainder (33 percent); funding from other sources is negligible and not reported on a consistent basis. Tuition and fees in public universities are, for the most part, proportionately small. Several universities, however, are beginning to develop strategies for diversifying revenue sources, with varying results. These include fund-raising efforts and increasing tuition and fees. Private universities support their operations primarily through tuition and fees. The federal government in Mexico has tried to influence the internal allocation of public funds through competition for special project-specific funds called FOMES.

In the United States, college and university revenues are much more dependent on tuition and student fees. The U.S. Department of Education (1994) reported that in fiscal year 1992, federal funds provided 12 percent of higher education revenues, state and local governments provided 28 percent, and private sources (endowment income, grants and contracts, and gifts) accounted for another eight percent. Most of the remainder (52 percent) comes from either tuition or

charges for educational services, funds that are provided by the students themselves or their families. Current trends among states in the WICHE region show both the federal and state share declining, shifting as much as fifty percent of the cost of obtaining a postsecondary education directly to students (WICHE, 1995).

During the 1980s, both the federal and state governments sought to influence universities through a series of categorical or incentive-grant programs. These typically focused university attention on federal or state priorities, but left institutions with some choices as to how to respond. The economic downturn of the 1990s led to the suspension of most of these programs. Attention has shifted, instead, to issues of accountability. States have been developing comparative performance indicators that are beginning to be linked to funding allocations (Ewell and Kent, 1995).

Education Structure: Size and Complexity

The U.S. and Mexican systems of postsecondary education are structured differently:

Mexico:

- Mexico has three categories of postsecondary institutions: public universities[6], regional technological institutes, and private institutions.
- There are 36 public universities, 87 regional technological institutes, and 35 private institutions. There also are several hundred "other" institutions; enrollment in these equals less than 16 percent of the country's total enrollment.
- In 1993, ANUIES and SEP reported that 79 percent of 1.35 million students in higher education were enrolled in public institutions and 21 percent in private institutions.[7]

[6] The term "university" in Mexico does not have a consistent definition. In general, it is used to refer to institutions which offer *licenciatura* degrees, or higher. A university does not necessarily have teaching or research in the arts, sciences or humanities, or graduate programs. Officially, SEP defines a university as an institution offering at least six *licenciatura* degrees covering three disciplines, at least one of which must be in the social sciences.

[7] ANUIES groups institutions under two headings: public and private. Public includes: universities and technological institutes. Private includes: universities, institutes, and others (centers and schools). SEP categorizes institutions into four types: federal, state, autonomous, and private.

- Higher education enrollment in Mexico's public state universities varies from more than 147,000 students at the National Autonomous University of Mexico City (UNAM) (excluding tech and high school enrollment), to fewer than 300 at El Colegio de México.

United States:

- The higher education system in the United States is also complex. The most common criteria for classification of higher education institutions is known as the Carnegie Classification system. Six major types of institutions are defined: research universities, doctoral granting universities, master's (comprehensive) universities and colleges, baccalaureate (liberal arts) colleges, professional schools and specialized institutions, and two-year colleges. Institutions are classified on the basis of the highest level of degree awarded, number of degrees awarded, level of federal research support (for research institutions), and selectivity of admissions (for baccalaureate institutions). Institutions are further distinguished based on whether they are under public or independent (private) control (Carnegie Foundation, 1994).
- There are approximately 3,200 institutions of higher education in the United States, not including two-year private non-profit and private for-profit institutions, (687 or 21.5 percent are in the WICHE region). Nationally, 5 percent of higher education institutions are universities, 63 percent are other four-year institutions, and the remaining 32 percent are public two-year institutions (U.S. Department of Education, 1994).
- More than one-half of higher education institutions in the nation are independently controlled (55 percent). Nearly one-half (49 percent) of the institutions in the WICHE region are independently controlled. However, 79 percent of all students in the nation (87 percent of those in the WICHE region) are enrolled in public institutions (U.S. Department of Education, 1994).
- In fall 1992, approximately 14.5 million students were enrolled in the nation's institutions of higher education (3.5 million within the WICHE region) alone. The largest institution in the United States in fall 1992, the University of Minnesota, Twin Cities, enrolled more than 54,671 students. (Arizona State University, the largest institution in the WICHE region, enrolled more than 43,628 students. Thirty-three institutions in the region enrolled more than 21,000 students in 1992) (U.S. Department of Education, 1994).

Public and private education. In his report on Mexican higher education, Coombs (1991) attests to the wide ranging quality in higher education institutions. Regarding the public/private distinctiveness, Levy (1986) states that "there may be no national system of higher education anywhere with more salient public-private distinctiveness. It is specially notable for such distinctiveness to hold over time, and Mexico's has lasted for half a century. Unusually clear alternatives face the clientele, participants, policymakers and scholars of all the system." He also notes that there are two subsections in private higher education: the elite and the middle class. Ornelas (1989) and Levy (1986) agree that while the purposes that promoted the creation of the private universities varied, they usually were a response to elitist concerns. Other authors argue that private universities emerged because of the need for more quality in higher education programs, and to fill the high demand for education which public universities alone were unable to meet.

The elite subsection is composed of a few institutions that provide class segregation but are ideologically affiliated with the private sector or with the Catholic church. In Daniel Levy's (1986) examination of the factors that promoted the establishment and subsequent growth of private higher education in Mexico, he identified the problems of the public universities from the perspective of the "dominant" class:

- *Massificación*, particularly at UNAM, which meant that being a graduate from this or any other public university was no longer class distinctive.
- Growing politicization within public universities — among faculty, students and administrative workers (all unionized) — that was perceived as a menace to its elite class interests.
- A perception that public higher education was irrelevant to the expansion of private trade and industry. Some sectors perceived the liberal arts as useless for the betterment of the economy. Their economic and political projects required competent technicians and engineers interested in the growth of the private sector. This gave way to the creation of institutions with a marked developmentalist trend like ITAM (Instituto Tecnológico Autónomo de México) and ITESM.

The clientele of the middle class sub-sector of private education are those who have not been admitted to or are not interested in enrolling in the public system and cannot pay for an education at an elite institution. Among the first, says Ornelas (1989), are not only those with low academic records or low entrance examination results, but also workers and others who need special timetables, light

course loads and recognition (credit) for their work experience. Public universities did not respond directly to these needs in general, except in areas such as accounting and sometimes business administration. Some, but not all of these institutions, equivalent to proprietary schools in the United States, have high quality standards (Ornelas, 1989).

In 1986 Levy pointed out that: "Mexican private education is privately funded, and Mexican public education is publicly funded. Rarely can such generalizations be made so neatly, with so little reservation. Among private institutions, ITESM receives the most financial support from the State (federal government), and yet this accounts for less than 4 percent of ITESM's income. There are very few additional examples of private institutions receiving any annual State (federal government) subsidy..... Mexico's private universities have not even requested such subsidies." However, the federal government's new programs for subsidizing "excellent" or "priority" programs and special competitively-allocated public funds (FOMES) granted to private institutions are beginning to blur this distinction.

Levy (1986) states that administrators at many private universities believe that tuition should be as high as possible to maximize academic freedom and autonomy from government influence; nevertheless, they also try to keep tuition low to minimize the stigma of elitism and to attract student applications. Critical scholars have said private elite institutions are elitist in their selection procedures, but have as a goal a differential qualifying role, and observe quality standards to reach it. The "quality" they offer is in relation to the elite's need for a productive cadre who will fulfill the specific human resource needs of corporate business (Fuentes Molinar, 1989).

In the United States the distinction between public and independent (private) higher education is based upon funding sources and government oversight responsibilities. In general, public institutions receive annual or biennial appropriations from state legislatures or local governments for regular operating expenses; and, members of the governing boards are elected or politically appointed. Private institutions typically rely upon tuition and private donations or endowments to provide their revenue and, of course, appoint their own boards. Distinctions between public and private institutions, however, are becoming even more blurred as legislatures in some states provide funding to independent colleges and universities who enroll students in programs not available in the public sector, and as public institutions look for needed revenue from sources that once were the domain of independent institutions (e.g., foundations and corporations; capital campaigns). With respect to the curriculum, the only real distinction between

public and independent institutions may exist in the religious colleges. Finally, admissions selectivity, once a trademark of elite independent colleges, also has changed as student costs at these institutions climb beyond $20,000 per year.

Although the private sector is an important educational component in the United States and Mexico, higher education remains primarily a public function in both countries. In 1993, nearly 79 percent of the students in Mexico were enrolled in public institutions. In the United States, nearly 79 percent were enrolled in public institutions in 1992.

Four-year and two-year higher education institutions. The greatest distinction within the United States' higher education system comes between four-year colleges and universities and two-year community colleges. Community colleges serve a great variety of student and local community needs. The diverse functions of two-year colleges include: (1) transfer or university-parallel programs that provide the first two years of courses in the sciences, humanities and liberal arts designed to lead to a baccalaureate degree; (2) vocational or technical programs that contribute directly to occupational skills and qualifications; (3) general education separate from those included in either transfer or technical-vocational programs, and including studies in personal development and cultural enrichment; and (4) remedial education, designed to help students needing basic skills. In addition, community colleges typically provide an array of local services, often including extension education programs, and other group- or community-centered activities. Finally and importantly, community colleges are open admissions (i.e., no academic-based admissions requirements) institutions with low tuition rates.[8]

Higher education financing. In 1992, 16.3 percent of Mexico's public funds for education went to higher education. Institutions, in turn, allocated most of these funds to teaching (63 percent) and administration (22.8 percent), with 7.1 percent each to research and extension (Hanel and Taborga, 1993).

In the United States in 1992, 25.4 percent of state and local expenditures for education went to higher education (U.S. Department of Education, 1994). Of the funding allocated to institutions of higher education in that year, 30.7 percent was spent on instruction, 9.1 percent on research, 6.8 percent on academic support, 5.8 percent on scholarships and fellowships, and 4.8 percent on student services (U.S. Department of Education, 1994).

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[8] A similar kind of institution and academic program has been established in Mexico through the CONALEP system and the Colegio de Bachilleres. In addition, some public universities have developed an equivalent to the associate's degree program in certain fields.

Faculty Characteristics

Total Numbers of Faculty

In Fall 1992 there were 885,796 faculty members in the United States (Zimbler, 1994). This figure includes faculty from all types of institutions. In Mexico, there were 145,369 faculty members in Fall 1993 (SEP/ANUIES, 1994). The majority of faculty in each country is employed in the public sector: about 60 percent in the United States and 75 percent in Mexico.

Educational Level

Faculty in the United States are more likely to hold the doctorate than in Mexico. More than half (55 percent) of the faculty in U.S. colleges and universities have earned doctorates (U.S. Department of Education, 1993), whereas in Mexico about 3 percent have doctorates in public universities (SEP/ANUIES, 1993).

In Mexican public institutions, the highest degree held by a majority of faculty (64 percent) is the *licenciatura* (bachelor's degree) (SEP/ANUIES, 1994). Approximately 8 percent of faculty at Mexico's public state universities are *egresados*, that is they have completed all the coursework for the *licenciatura* but have not completed the final requirement (thesis or exam) needed to earn the degree.[9]

Faculty issues in Mexico must be considered in the context of the growth that has characterized the system since 1960. The relatively low level of educational attainment by faculty members began with the hiring of large numbers of faculty members in the 1970s to teach the continually increasing numbers of students. Total enrollment in higher education has grown from 289,000 students in 1971 to 1.35 million in 1993. Because of the economic crisis in the 1980s funding was not available for many faculty members to enter graduate education programs. Today, the federal government and the institutions are committed to reversing this situation and are allocating resources to faculty development in an effort to increase the number of faculty with advanced degrees.

[9] These percentages must be interpreted with caution. Several public universities offer high school programs in addition to their university program. In some cases, their faculty statistics include instructors teaching in their high school programs.

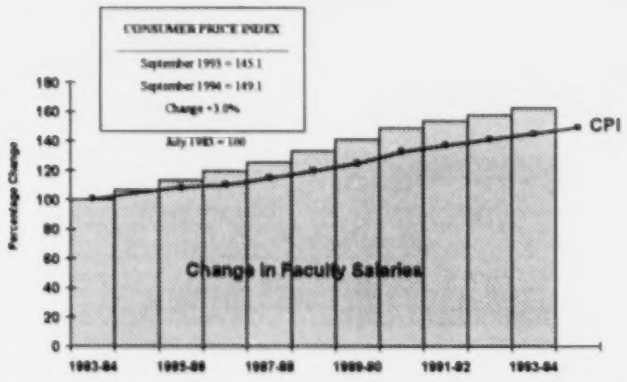
Faculty Salaries

While U.S. faculty salaries have been steadily increasing in the last decade, outpacing average increases in the cost of living (Graph 1), faculty salaries and their purchasing power in Mexico have been declining for two decades (Graph 2).[10]

In both countries there are significant differences between faculty salaries at public and private institutions. In the United States, the average salary of a full professor at a public doctoral granting university is $67,560, compared to $84,790 at a private doctoral granting university (American Association of University Professors, 1995).

In Mexico, public institutions continually lose highly qualified faculty to some private universities where salaries are higher. To forestall such losses, the National Researchers System supported by the National Council for Science and Technology (CONACYT) has supplemented the salaries of faculty members through a competitive grants program to reward faculty research activity. In addition, institutions with support from SEP, or through internal reallocation of funds, are able to offer bonuses to their faculty on a competitive basis for the same purpose.

Graph 1
Percentage Change in U.S. Faculty Salaries as Compared to the Cost of Living 1983-84 to 1993-94



SOURCES: American Association of University Professors; U.S. Department of Labor, 1994

[10] One should keep in mind that salary trends in both countries need to be analyzed in the larger economic context.

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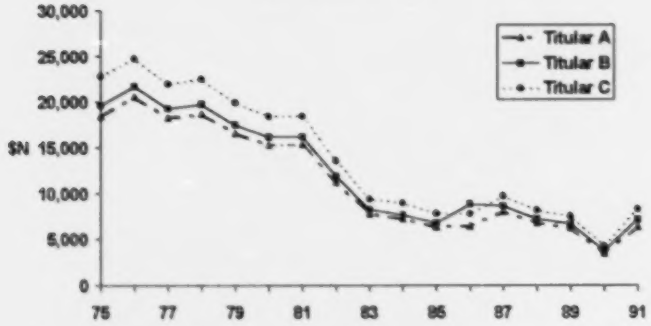
Graph 2
Annual Faculty Salaries in Mexico by Rank in Constant New Pesos ($N) (Base Year 1978)



SOURCE: *ANUIES Report on Faculty Salaries*, 1993, unpublished paper.
Real salaries were obtained with 1978 as a base year; the formula for deflation was as follows:
SALARIES AT CURRENT PRICES = (SALARIES/INPC 1978 BASE)100
WHERE INPC is the consumer price index reported for December of each year by Banco de Mexico.

Full-time/Part-time Status

One of the major differences between faculty in the United States and Mexico is their status as full- or part-time employees. Mexican universities rely heavily on part-time faculty, most of whom are paid by the hour for classroom teaching.

In Mexico, one quarter of the faculty are employed full-time (SEP/ANUIES, 1993). This represents a considerable increase from 7 percent in 1968 (Lorey, 1993). Most Mexican faculty members (66.6 percent) are hired to teach on a temporary, per-class basis and paid on an hourly rate. A few faculty (8.3 percent) are salaried on a part-time basis (Lorey, 1992). The professionalized curriculum, which requires that faculty members be familiar with current workforce demands and requirements, is one reason cited for the large percentage of part-time faculty members. Many simultaneously hold positions in non-academic professions.

In the United States, about two-thirds of the faculty are full-time, with variations between different types of institutions (U.S. Department of Education, 1993). For example, community colleges employ the greatest overall number and percentage of part-time faculty. According to Gappa and Leslie (1993), as many as 60 percent of faculty in some community colleges are part-time. In contrast, at research universities only 13 percent of faculty work part-time.

Student/Faculty Ratio

There is considerable variation in student/faculty ratios among Mexican institutions, depending on their type (private or public), their educational level, and whether all faculty or only full-time faculty are counted. When part-time and hourly faculty are counted, institutions have relatively low student/faculty ratios, ranging from a low of 5:1 at graduate-level institutions to 8:1 at teacher education institutions to a high of 10:1 at undergraduate-level institutions. Differences between public and private institutions are relatively small. However, when comparisons are made based only on the number of full-time faculty members, substantial differences emerge. The student/faculty ratio across levels of public institutions ranges from 39:1 at teacher education institutions to 11:1 at graduate-level institutions. Among private institutions, the range is from 107:1 at teacher education institutions to 18:1 at graduate-level institutions. This variability in range also is demonstrated using 1990 ANUIES data for all faculty members. The highest ratio 138:1 was at the Universidad de Guadalajara and the lowest was 7:1 at Universidad Autónoma de Baja California.

The average student/faculty ratio across the United States is 13:1 (U.S. Department of Education, 1993); this average is lower at two-year colleges, with 10 students per faculty member (Lovell and Soler, 1995).

Faculty Workload and Productivity

In Mexico and the United States faculty are being asked to demonstrate (1) how they spend their time and (2) the results of their efforts. The sources of these pressures are different in the two countries, and they are pushing faculty in different directions.

In the United States, state legislatures are demanding that faculty dedicate more time to teaching and interacting with undergraduate students and less time to research. Surveys of faculty workloads among faculty who spend at least part of their time teaching undergraduates suggest that, on average, faculty work about 55 hours/week (The American College Teacher, 1991). When asked about time devoted to either teaching, preparing to teach, or advising students, faculty vary considerably. They range from a low of 11 hours/week (20 percent of their time) to a high of 40 hours/week (78 percent). Most faculty (63 percent) report that their primary interest is in teaching. It is important to realize, however, that this

interest varies considerably across types of institutions. Community colleges, for example, do not generally support research.

Despite the fact that state legislatures are pressuring faculty to devote more time and attention to undergraduate teaching, reward structures within the institutions have not changed. In general, the more time a faculty member spends on teaching, the lower his or her salary (Fairweather, 1993). Research remains the primary activity that is rewarded in salary and promotion decisions.

In Mexico a different situation is unfolding. Traditionally the main focus has been a teaching-oriented environment and in general, faculty workload on average, is higher than in the United States. The federal government has been encouraging more research activity by faculty members who have primarily been involved in teaching. The federal government rewards faculty members for research efforts through competitive grant programs. Surveys (Gil, *et al.*, 1995) suggest that among faculty who work exclusively in higher education there is a trend toward diversified workloads. Only 23 percent report that they devote all their time to teaching and another 17 percent divide their time between teaching and other activities. Most (51 percent) report that they spend some of their time on research. Forty-three percent of Mexican faculty report that they would like to work mainly in research and partly in teaching. In Mexico, faculty are economically rewarded for responding to federal policy directions.

An international survey which included faculty from both the United States and Mexico (Boyer, *et al.*, 1994) offers a more direct comparison of faculty workloads and priorities in the two countries. Faculty in Mexico and the United States were remarkably similar in their preference for teaching over research (55 percent), in the number who had published an article in an academic journal in the past three years (75 to 80 percent), and in their perception that research is important to faculty evaluation at their institution (75 percent). Substantial differences existed on items related to the relationship between research and tenure. Faculty in the United States agreed much more strongly that publishing was required for tenure, that they frequently felt under pressure to do more research than they would like to do, and that the pressure to publish reduces the quality of teaching at the institution.

Student Characteristics in Mexico and the United States

Providing access to higher education to a larger percentage of the population is a concern in both Mexico and the United States.

Mexico:

- Enrollment in Mexican higher education has increased dramatically. Between 1970 and 1990 total enrollment increased more than 400 percent from approximately 212,000 to more than 1 million students.
- The Mexican system of higher education relies heavily on publicly supported institutions. Seventy-nine percent of the students enrolled in higher education in Mexico are enrolled in public institutions.
- In 1993, the national student population of 25,347,451 was distributed as follows: preschool 11.28 percent; elementary school 56.91 percent; secondary and job training school 18.09 percent; high school and middle professional school 8.6 percent; undergraduate studies and teacher training 4.8 percent; and graduate studies at 0.19 percent (Ornelas, 1993).
- More than three-quarters of each generation of students leave the education system before reaching higher education. Out of 100 children who enter primary education, 65 reach fourth grade and 46 finish it. Of the 46, 16 do not enter middle education (*secundaria* and *bachillerato*), and 7 drop out. Of the remaining 23, 10 enter higher education, and 5 graduate (Alonso, 1989).
- Of those five students who do graduate, more than half do not complete all the requirements for a registered degree. In 1985 there were 2 *egresados* (students who have completed all the coursework for the bachelor's degree but have not completed the final thesis/exam requirement) for every registered degree.
- Access to higher education is not distributed equally throughout the country. Fifteen percent of Mexico's population between 20 and 24 years-of-age is enrolled in higher education. However, this figure varies from a low of 5 percent in southern states to close to 25 percent in Mexico City and the northern states.
- Annual registration costs for students vary enormously in Mexico, from approximately 400 New Pesos at UNAM to around 25,000 New Pesos at ITAM in 1994.

- Between 13 and 17 percent of those holding *licenciatura* degrees, migrated to another state in order to earn their degree. Migration increases student costs. With few exceptions, housing is not available in public or private institutions; the majority of students commute to school.
- Women have an increasing presence in Mexican higher education. Between 1970 and 1990 enrollment by women increased from 10 to 41 percent of total enrollment. Women also are increasing their representation in traditionally male-dominated fields. While women made up only 10 and 13 percent of enrollments in economics and business administration in 1969, in 1990 they made up 37 and 48 percent, respectively.
- In Mexico, diversity has usually been understood from a socio-economic viewpoint. Categories have been expanded to include age, gender, urban/rural province. Religion and race have only recently been considered as valid categories for promoting diversity/access to higher education. No data on these issues have been collected at this time.
- There are very few students who enroll on a part-time basis at public universities. Most are enrolled full-time and hold a job in addition to their academic responsibilities. This is becoming more and more common in private universities as well.

United States:

- Enrollment in higher education in the United States has also increased, but not as dramatically as in Mexico. Between 1970 and 1990 total enrollment increased by 69 percent, increasing from 8.6 million to nearly 14.5 million. Much of that growth occurred during the 1970s and since then enrollments have increased more gradually.
- The majority of students in the United States are educated in public higher education: 79 percent of all students in the nation and 87 percent of those in the WICHE region (15 western states).
- About 12 percent of each generation of students leaves the educational system before reaching higher education, although this figure varies widely from state to state. On average, however, out of every 100 students who enter eighth grade, 88 complete high school (NCES, 1993). Of these, 52 enter postsecondary education immediately following graduation and 14 more enter postsecondary education at some later point (U.S. Bureau of the Census, 1993). Of the 66 high school graduates who eventually enter postsecondary education, approximately 11 are seeking short-term vocational training, 21 are

seeking an associate's degree, and 34 are seeking a bachelor's degree. Of these, approximately 4 have completed an associate's degree and 26 are continuing to pursue a bachelor's degree three years later (NCES, 1992).

- Students or their families bear a significant portion of the cost of higher education. A number of scholarship and grant programs provide some assistance, but a significant number of undergraduate students take out loans to finance their education. Of the undergraduate students enrolled full-time in Fall 1989, more than half (56.4 percent) received some type of financial aid and nearly 30 percent took out loans. Part-time students are less dependent on aid and relatively few (6.4 percent) rely upon loans (U.S. Department of Education, 1994). Overall, however, a significant number of students leave higher education with a debt load that must be repaid once they begin working.
- The college student of the 1990s in the United States is far more likely than in earlier decades to be over 25 years of age, a woman and/or a racial or ethnic minority. This new clientele tends to study part-time, work part-time, be married and/or have family responsibilities and be pursuing education for career-related reasons.
- The representation of women in higher education has increased substantially since the 1950s. In 1992, 54 percent of students enrolled in United States higher education institutions were women, compared with 41 percent in 1970 and 36 percent in 1957.
- Due primarily to increases in the size of non-White and Hispanic populations in the United States, students from these previously underrepresented racial and ethnic student groups are making up an increasing proportion of higher education's enrollment. Non-White and Hispanic students made up 22.5 percent of higher education enrollment in 1992, but only 16 percent of enrollments sixteen years earlier. The majority (47 percent in 1992) of these students are enrolled in the country's two-year junior and community colleges.
- In 1970 only 28 percent of total enrollment in U.S. higher education were 25 years of age or older. By 1992 older students made up more than 46 percent of total enrollments.
- More students are enrolling part-time. In 1970 only 32 percent of students attended the nation's colleges and universities part-time, compared to nearly 44 percent in 1992.

- Tuition costs vary enormously depending on the location, type, and level of the institution. Resident undergraduate tuition and fees averaged $2,696 nationally during the 1994-95 academic year (WICHE, 1995). Within the region served by WICHE, annual tuition and fees ranged from a low of $880 to a high of $4,596. In general, tuition and fees charged by two-year colleges are about half that charged by four-year institutions. Among four-year institutions, tuition and fees at private institutions range from three to six times that at public institutions (U.S. Department of Education, 1994).

Access and Quality

For more than a century, low tuition has been a fundamental premise of higher education in the United States. Support for public higher education in Mexico is held under the same premise. In the U.S., policymakers have reasoned that low tuition promotes educational opportunities for those who might not otherwise attend college, and a well-educated citizenry provides significant economic benefits. However, as we near the beginning of the 21st century, funding constraints, significantly increasing enrollment demands and concerns for quality are bringing into question public higher education's ability to continue broad access at low cost. This issue of high student enrollments and insufficient revenue has been critical, particularly for the system of higher education in Mexico. Recently the Mexican government has acted to establish policies that tie evaluation to funding with the hope of improving the quality of education.

Access demands. Higher education has grown rapidly in Mexico since the late 1960s. This growth was promoted by open admissions procedures, flexible standards and low student fees. The right to pursue higher education followed from a broad interpretation of the Mexican Constitution requiring broad access and free university education for all Mexicans. Since the 1960s, university education has become a strong symbol of social mobility and status (Lorey, 1992 and 1993; Sarukahn, 1994).

In the United States higher education enrollment growth began in the post World War II period and continued to increase at significant rates until the early 1980s. Between 1970 and 1980 higher education enrollment increased 41 percent. From 1980 to 1992, enrollment increased about 20 percent. In 1992, the total enrollment in the United States exceeded 14 million. Everyone acknowledges that higher education access demands will continue. By 2009, a projected 3.1 million students will graduate from high school; in the WICHE states the number of high school graduates will increase 65 percent from 1992 to 2009. Higher education also

faces increasing enrollment demands caused by a rapidly increasing population and a changing workplace.

Access limitations. Both countries face similar problems — responding to the increased demand for higher education with limited funds. In the 1990s, state appropriations to higher education in the United States declined in real dollars. The response in many states was to limit access. Access is limited by increasing student costs; placing limits on enrollments; introducing selective admissions requirements; inflexible course schedules; and remote locations.

In the United States between 1983 and 1993 tuition grew from 24 to 31 percent of unrestricted revenue. During this period, tuition and fee increases outpaced inflation rates, increases in disposable personal income, and growth in financial aid. As a result, opinion polls show the public believes that within 10 years a college education will be unaffordable to a majority of Americans (Harvey and Immerwahr, 1993). Within states, institutions chose from a number of alternatives — limiting enrollment in the more expensive programs or simply limiting course offerings and class size.

In Mexico, tuition in public institutions is heavily subsidized, but not free. In some institutions student tuition loans are available, but student financial aid is not a concern of most public institutions. Merit or need-based scholarships are rare in public universities but are becoming more available in private universities. Limits to access are seen in other ways, however. The increased demand for higher education means that most institutions are easily filled by younger students, typically those between 20 and 24 years of age. This leaves little room for adults at a time when adult retraining is considered an important part of economic restructuring. Further, current economic problems in Mexico create hard choices for young people. Many simply cannot forego the wages earned in order to attend college, especially given that part-time enrollment is not an easy option in undergraduate studies.

Quality issues. Higher education quality issues have been a significant policy concern in most countries since the mid-1980's. Higher education's ability to prepare students for the workforce and society of the 21st century has been the subject of much debate.

In 1990, Mexico's Secretary of Education invited the International Council for Educational Development (ICED) to conduct an assessment of Mexican higher education. In the "Coombs" report (Bienayme, et al, 1992) growth was identified as antithetical to quality. Issues related to the condition of the faculty also have been

the focus of many discussions on quality concerns. These include the high percentage of faculty who are hired on an hourly basis; low faculty salaries; a predominance of professors without graduate degrees; limited opportunities for faculty development; and limited or no academic support services. The need for quality improvement has been a major policy concern addressed in documents and statements from ANUIES and CONAEVA. The following criteria are frequently cited as factors related to quality in Mexico:

- funding
- faculty salaries
- faculty training
- relevance to national development projects
- evaluation
- innovation (instructional and administrative)
- existence of other educational alternatives
- inter-institutional and regional cooperation
- coordination with the private sector

Factors limiting quality have been identified as:

- broad access to higher education
- seemingly unlimited autonomy of the institutions
- institutional isolation.

The relationship of a quality system of higher education to the economic needs of the states in the western U.S. was the focus of a major study by the Western Interstate Commission for Higher Education (WICHE, 1992). The conclusion of this study was that dramatic change is needed for higher education to be responsive to the needs of a global and technologically oriented economy and multicultural society. Quality concerns focus on a stronger commitment to undergraduate education; the need to educate a diverse population; and, the importance of building partnerships with elementary and secondary schools. They include:

- a rigorous and integrated curriculum that blends liberal arts with vocational, technical, and professional education;
- an infusion of internationalism in the curriculum and in the campus environment; and
- a responsiveness to the educational needs of higher education's new clientele.
- higher education leadership in demonstrating that racial and ethnic diversity is an institutional, societal and economic asset;
- effective and efficient use of technology;
- campus-wide, active participation with public schools; and a renegotiation of faculty roles providing faculty professional development opportunities and faculty hiring, review and promotion policies that recognize a new agenda for higher education.

Higher Education, NAFTA, and Binational Cooperation

The signing of the North American Free Trade Agreement (NAFTA) is certain to change the face of higher education across the continent. Higher education will play an increasingly central role in promoting mutual understanding and better relations among the North American countries. As economic alliances continue to develop, pressures will arise for a more integrated North American higher education system.

Public higher education in Mexico, the United States and Canada is subject to the provisions of NAFTA in three major areas:

- Cross-Border Trade in Service. With respect to education service providers, e.g., professors, academic administrators, and technical teachers, each government must treat these individuals according to the same contract, salary, and benefit policies that apply to the country's service providers.
- Licensure and Certification. Organizations within each country are encouraged to develop and recommend mutually acceptable standards and criteria for the licensure and certification of professional service providers. The Center for Quality Assurance in International Education, based in Washington, D.C., has taken a leadership role in bringing together representatives of various professional associations to discuss the development of common standards.

- Labor Issues. Higher education service providers are identified in NAFTA as temporary migrants who may work in another of the NAFTA countries on a temporary basis if they meet minimum education and licensing requirements.

There is already considerable educational exchange activity between Mexico and the United States. With NAFTA, colleges and universities in the border states have an even greater need and opportunity to develop the important binational and complementary academic programs that demonstrate the overwhelming benefits of regional planning and resource sharing. To date, public and private universities in both countries have initiated numerous binational and international programs in response to NAFTA. A comprehensive and binational approach is needed to identify challenges and develop programs that address human resource needs in the border region.

In both countries, federal and state governments are actively engaged in finding ways to respond to new higher education opportunities created by NAFTA and the globalization process. Some examples follow:

- In Mexico, the Ministry of Education (SEP), working with the Organization for Economic Development and Cooperation (OECD), is preparing a background report on higher education in Mexico. A basic premise of this report is the importance of involving a variety of international experts in an evaluation of higher education policies in Mexico.
- Bilateral exchanges are being promoted by the U.S.-Mexico Commission for Educational and Cultural Exchange which administers the Fulbright and Fulbright Garcia-Robles grant scholarships for cultural and educational exchanges.
- The United States Department of Education (DOE) and the U.S. Information Agency (USIA) are working with the Mexican Ministry of Education and counterparts in Canada to fund new education exchange programs, joint degree programs, telecommunications and distance education efforts.
- In 1993, the Institute of International Education (IIE) published an inventory of trilateral and bilateral educational linkages in the three North American countries.

- Public agencies such as CONACYT (National Council for Science and Technology) has entered into an agreement with the U.S. National Science Foundation and the Canadian Council for Research in Natural Sciences and Engineering to establish a North American Scholarship program. The program will provide funding to doctoral students working on projects in the natural and social science fields, engineering and other technical areas.
- The Program for North American Mobility in Higher Education was announced by the Governments of the United States, Mexico and Canada in June, 1995. The primary objective of the initiative is to increase North American student mobility. In September, 1995, a total of $1.3 in funding over a three-year period was granted to 11 projects covering a range of fields, including architecture, business, engineering, health, law and technology.
- Finally, the Western Interstate Commission for Higher Education, working in partnership with the Mexican Association for International Higher Education (AMPEI), the University of Arizona, and the Autonomous University of Baja California, have initiated a binational project. Its goal is to increase understanding and opportunities for collaboration between higher education institutions and educational leaders in the western U.S. and Mexico *(see page 37 for more detail).*

Conclusion

This being a descriptive report, it was not the authors' intent to derive any definitive conclusions. Nonetheless, some interesting observations can be made from this comparative study. These observations create an opportunity for further research and discussion in several areas.

The higher education structures in both Mexico and the United States are complex, each reflecting its unique political, social and economic contexts. Despite the differing contexts, many of the dilemmas they face are similar. Both countries are seeking to achieve a balance in several areas:

- balancing the mission of higher education between responding to individual needs while addressing societal needs;
- maintaining institutional autonomy and yet being held more accountable to the general public and higher education constituents;

- improving program quality, and at the same time broadening access to higher education;
- responding to global concerns while respecting the national characteristics particular to the country's educational system;
- competing for limited funding resources in an environment where higher education is not necessarily a national priority;
- reinventing "the university" and responding to new roles and challenges;
- developing innovative ways to collaborate between institutions and countries, required by the newly defined global context.

This essay is by no means an exhaustive report on higher education in Mexico and the United States. Some additional areas for further comparative study might include:

- leadership in higher education institutions and the influence that their leaders have in shaping the structure of education;
- the role of internal constituents (students, faculty, board members, administrators) in the decision making processes;
- the use of technology in delivering education, and its role as a catalyst for transformation;
- the relationship between credentials and faculty's teaching effectiveness.

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The U.S.-Mexico Educational Interchange Project

"Removing the obstacles to North American educational interchange and increasing understanding and opportunities for collaboration in the western United States, Mexico, and Canada."

Through the creation of the U.S.-Mexico Educational Interchange Project and with the support of the Ford and William and Flora Hewlett Foundations, the Western Interstate Commission for Higher Education has combined its efforts with the Asociación Mexicana para la Educación Internacional, the University of Arizona, and the Universidad Autónoma de Baja California are working to foster educational exchange across the western region of our North American borders.

Operating under an interstate compact, **WICHE**'s mission is to foster regional cooperation and resource sharing among higher education institutions and 15 western states. **AMPEI** is an association composed of Mexican educators with a special interest in international relations and in fostering innovative models of academic exchanges capable of increasing the quality of Mexican institutions of higher learning. **The University of Arizona** is dedicated to preparing students for an increasingly diverse and technological world and is committed to linking the institution's education and research with international needs in a spirit of collaboration. **The Autonomous University of Baja California** strives to satisfy the needs of the state's professional community; education is student-focused and involves an interdisciplinary approach.

The U.S-Mexico Project's central strategies are:

- ***convening North American higher education leaders to encourage new collaborations.*** A series of annual invitational Educational Leadership Seminars enable key leaders in higher education to meet periodically to address specific issues of relevance in North America, become better acquainted and to mutually design projects which address salient issues and advance opportunities for U.S.-Mexico and general North American education collaboration. The next invitational seminar, *"The Role of Technology and Education in North America"* will be held November 13-15, 1996 in San Francisco, and hosted by California State University.

- ***expanding dialogue and access to information resources.*** Utilizing an electronic network, EL NET—the Educational Leadership Network—the project provides an expanding information resource which has become a leading dissemination vehicle for important information related to higher education in North America. EL NET currently operates a Web site (*http://www.wiche.edu/elnet/home.htm*) and a listserv (*elnet-l@lists.colorado.edu*).

- ***comparative research series: "Understanding the Differences."*** Policymakers and practitioners often lack familiarity with the structures and issues of each other's educational systems. In response to this need for information about the U.S. and Mexico's educational systems, a comparative research series entitled *Understanding the Differences* was created. The comparative report and working papers address policy approaches to evaluation and incentive funding; faculty characteristics and policy issues; the educational systems and prospects for reform and collaboration; and, higher education's responsiveness to the new economy and the impacts of NAFTA. (See our brochure to order copies.)

- ***leadership development: The Institute for North American Higher Education.*** If good intentions and policies at the binational and trinational levels are to be transformed into concrete and action-oriented programs at the institutional level, effective leaders must possess a global perspective with knowledge and understanding of higher education in the North American region. The Institute of North American Higher Education will provide opportunities for campus administrators to be involved in exchanges and international training in Mexico, the United States and Canada. The pilot intensive three-week training program is scheduled for 1997.

The U.S.-Mexico Educational Interchange Project's unique collaborative framework brings together the combined capacity and commitment of its partner institutions and of those individuals dedicated to encouraging higher education cooperation across national boundaries.

For more information about becoming a participating institution, contact:

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